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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/440,467	11/15/1999	JUN YOSHIDA	35.C14025	3001

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FITZPATRICK CELLA HARPER & SCINTO
30 ROCKEFELLER PLAZA
NEW YORK, NY 10112

EXAMINER

AKHAVANNIK, HUSSEIN

ART UNIT	PAPER NUMBER
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2621

DATE MAILED: 07/02/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/440,467

Applicant(s)

YOSHIDA ET AL.

Examiner

Hussein Akhavannik

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6,8-13,28 and 29 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-6,8-10,12,13,28 and 29 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on 21 April 2003 is: a) ☒ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Response to Amendment

1. The Applicant's amendment to cancel claims 14-27 overcomes the examiner's restriction requirement cited in paragraph 1 of the previous office action.
2. The Applicant's amendments to figures 10 and 24 overcome the examiner's objection cited in paragraph 3 of the previous office action.

Response to Arguments

3. Applicant's arguments filed 4/21/2003 have been fully considered but they are not persuasive.

Applicant alleges that Rhoads inserts tracer data when embedded watermark data is detected and does not teach embedding a watermark when it is detected that a watermark has not been correctly embedded in the digital contents. Examiner agrees that Rhoads does not detect whether a watermark has been correctly embedded. However, Rhoads does embed watermark data (tracer) into the digital contents when an illegal process has been performed. In the system of Rhoads, that illegal process corresponds to detecting a banknote. In the system Barton, that illegal process corresponds to detecting whether a watermark has been correctly embedded in the digital contents. Therefore, both systems are interested in digitally detecting whether an illegal process has been performed and Rhoads inserts a watermark when that process has been performed.

Rhoads explains in column 8, lines 30-40 that embedding a watermark when an illegal process is performed would be advantageous as the embedded watermark can steganographically

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embed information about the illegal process, such as information about the machine performing the illegal process or the date that the illegal process.

Furthermore, Mintzer et al (U.S. Patent No. 5,875,249) explain that when a watermark is correctly embedded (discrepancy is detected), then a system should take appropriate action to guard against malicious attacks. A well-known method of guarding an image for malicious attacks is watermarking an image, so that properties of the image are recognized or so that further use of the image is halted (for example by halting the copying of the image as explained by Rhoads in column 8, lines 21-23).

Drawings

4. The proposed drawing correction and/or the proposed substitute sheets of drawings, filed on 4/21/2003 has been approved. A proper drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The correction to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 2-5 and 7-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 2-5 and 7-9 recite the limitation "said processing means" in parent claim 1. There is insufficient antecedent basis for this limitation in the claim.

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Claim 10 recites the limitation "said control means" in parent claim 1. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1, 12-13, and 28-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barton (U.S. Patent No. 6,115,818) in view of Rhoads (U.S. Patent No. 6,449,377).

Referring to claims 1, 12, and 13,

a. A detection means for detecting whether an illegal process has been performed for input digital contents based on a result obtained by performing a predetermined operation for at least part of the digital contents is explained by Barton in column 8, lines 25-35.

The predetermined process of comparing the signatures determines whether the embedded data string has been tampered with, corresponding to an illegal process.

b. Embedding means for embedding a visible or invisible digital watermark to the digital contents the when an illegal process has been detected is not explicitly explained by Barton. However, Rhoads does explain the predetermined process of steganographically inserting tracer data into the image of a banknote when copying a banknote is detected in column 8, lines 30-40. Such a tracer data would allow authorities to trace the location, date, and/or time that the illegal process took place. Furthermore, data can be embedded to inform a system to halt any process which involves data, which

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has had an illegal process, associated with it. Such a tracer insertion process can be embedded into the system of Barton when the illegal process of incorrect watermark embedding has been detected. Also, because the data of Barton and Rhoads are processed digitally, it would have been obvious to one of ordinary skill in the art to add the tracer as either visible or invisible data. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to perform a predetermined process when an illegal process that been detected so that the illegal process can be halted or traced.

c. The result of the predetermined operation indicating whether a digital watermark has been correctly embedded and judging that an illegal process has been performed when the watermark is not correctly embedded is explained by Barton in column 8, lines 25-35. If the signature were correctly embedded then the signatures would match. If the signatures do not match, then the file is determined to have been illegally tampered with.

Referring to claims 28 and 29, the embedding means indicating information concerning the transmission of the digital contents corresponds to claim 1b or 12b. Rhoads explains in column 8, lines 20-40 that the tracer data may include information about the location, date, and/or time that the illegal process took place, thereby indicating information about the transmission of the digital contents.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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Bhaskaran et al (U.S. Patent No. 6,064,764) – To exhibit detecting a region of digital data that has been tampered with as explained in the abstract.

Iwamura (U.S. Patent No. 6,425,081) – To exhibit a verification system in an image filing network and determining whether an illegal process has been performed.

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hussein Akhavannik whose telephone number is (703)306-4049. The examiner can normally be reached on M-F 8:30-5:00.

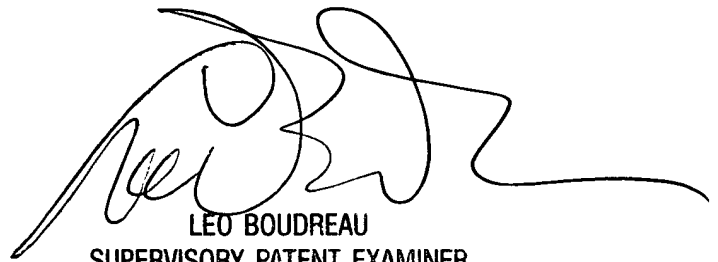
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo H. Boudreau can be reached on (703)305-4706. The fax phone numbers for the organization where this application or proceeding is assigned are (703)872-9314 for regular communications and (703)872-9314 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-3900.

Hussein Akhavannik
June 29, 2003

H-A.



LEO BOUDREAU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600